

REMARKS/ARGUMENTS

Claims 10, 20, 27 and 33 have been canceled without prejudice.

Claim rejections 35 U.S.C. § 103

Claims 1, 7-11, 15-16, 18-20, 22, 25-27 and 33 were rejected, under 35 U.S.C. 103(a), as allegedly being unpatentable by Kissel (U.S. Patent No. 5,744,932) (hereinafter Kissel) in view of Hammond et al. (U.S. Patent Application Publication 2002/0138775) (hereinafter Hammond). Applicants respectfully traverse the rejection.

Independent Claim 1 recites (emphasis added):

An electronic system comprising:
a magnetic sensor for coupling to a battery string at a single point, wherein said magnetic sensor is connected between at least two batteries within said battery string, for sensing a signal thereof; and
a logic circuit coupled to said magnetic sensor and for automatically establishing threshold settings for detecting a battery failure of said battery string and, in response thereto, said circuit for automatically generating a message over a communication network wherein said message initiates generation of an electronic message (email) to a prescribed recipient and wherein said email indicates and describes said battery failure of said battery string and wherein said message initiates a call to said prescribed recipient at a remote location notifying said prescribed recipient of said battery failure of said battery string.

Accordingly, a magnetic sensor connected between at least two batteries automatically establishes threshold setting and in case of battery failure a message is generated wherein said message indicates and describes battery failure by initiating a call to the prescribed recipient at a remote location.

“To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - §2143.03 for decisions pertinent to each of these criteria.” See MPEP 2100-134.

Kissel discloses an AC current probe connected between the rectifier and the backup batteries (see Kissel, col. 4, lines 54-55 and Figure 1). Kissel fails to expressly or inherently disclose that a magnetic sensor is connected between at least two batteries within the battery string, as claimed. In fact, Kissel teaches away from the recited limitation because Kissel discloses that the AC current probe is connected between the rectifier and the backup batteries instead of connecting between at least two batteries within the battery string, as claimed.

The rejection admits that Kissel does not specifically disclose that a message describing the failure of the battery string is generated, as claimed. The rejection relies on Hammond to remedy this failure. The Applicants respectfully traverse.

Hammond discloses that occurrence of a predetermined event causes an electronic mail to be sent to one or more users, notifying the users of the occurrence of the one or more specified events (see Hammond, paragraphs 6-7). Hammond fails to teach or suggest that the message initiates a call to the prescribed recipient at a remote location notifying the prescribed recipient of the battery failure of the battery string, as claimed. Accordingly, not only Hammond fails to teach or suggest initiating a call to a prescribed user, as claimed but Hammond also fails to teach or suggest a magnetic sensor connected between at least two batteries within the battery string, as claimed.

Moreover, the Applicants respectfully submit that one would not be motivated to combine Kissel and Hammond. Kissel is directed to monitoring the condition of backup batteries where onsite supervisory personnel are present and are notified of a failure through an audible or visible alarm (see Kissel, col. 5, lines 9-10). In contrast, Hammond is directed to a situation where supervisory personnel are not present onsite in order to be notified through audible or visible alarm, thus an electronic mail is generated (see Hammond, paragraphs 6-7).

Accordingly, one would not be motivated to generate an electronic message or initiate a call when supervisory personnel are present and can be notified through visible or audible alarm. As such, one would not be motivated to combine Kissel and Hammond.

Moreover, the Applicants do not understand Kissel alone or in combination with Hammond to either teach or suggest a logic circuit for automatically establishing threshold settings for detecting a battery failure, as claimed. Not only Hammond fails to teach establishing threshold settings automatically, as claimed but Hammond in fact teaches away by disclosing that threshold values are preferably set as default values and user definable (see Hammond, paragraph 12). Therefore, threshold values are set by the user and not established automatically, as claimed.

Additionally, the Applicants do not understand Kissel alone or in combination with Hammond to either teach or suggest that a sensor is a magnetic sensor, as claimed.

Accordingly, Kissel alone or in combination with Hammond does not render independent Claim 1 obvious, under 35 U.S.C. 103(a). Independent Claims 11, 16, 22 and 28 recite limitations similar to that of independent Claim 1

and are patentable over the cited combination for similar reasons. Claims 7-9, 15, 18-19, 25 and 26 are patentable by virtue of their dependency.

Moreover, regarding Claim 8, the rejection asserts that the Abstract in Kissel along with Figure 1 disclose that the logic circuit also detects failure in a rectifier of the UPS circuit, as claimed. The Applicants respectfully disagree. Kissel shows an AC to DC rectifier connected to a DC to AC inverter and further connected to a backup battery flow monitor. Kissel discloses a method and apparatus for monitoring the condition of backup batteries (see Kissel, Abstract) and fails to expressly or inherently disclose a system or method for detecting failure in a rectifier of the UPS circuit, as claimed.

Claim 9 is patentable by virtue of its dependency from Claims 1 and 8.

Claims 15 and 18 recite limitations similar to that of Claim 8. Therefore, Claims 15 and 18 in addition to being patentable by virtue of its dependency are patentable for reasons similar to that of Claim 8.

As such, allowance of independent Claims 1, 11, 16 and 22 and their dependent claims is earnestly solicited.

Claims 2-6, 12-14, 17, 21, 23-24 and 29-32 were rejected, under 35 U.S.C. 103(a), as being allegedly unpatentable over Kissel in view of Hammond and further in view of Simonsen (U.S. Pat. No. 5,047,961) (hereinafter Simonsen). Applicants respectfully traverse the rejection.

Claims 2-6, 12-14, 17, 21, 23-24 and 29-32 depend from independent Claims 1, 11, 16 and 28 and are patentable over the combination of Kissel and Hammond by virtue of their dependency. The rejection further relies on Simonsen. However, the Applicants do not understand Simonsen to remedy the failures of Kissel and Hammond discussed above.

Regarding Claim 2, Simonsen discloses a current sensor and an analog to digital converter (see Simonsen, col. 4, lines 30-42 and 66-68 and col. 5, lines 1-15). As discussed above, to establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The rejection without providing any evidence what so ever asserts that:

“adding a microprocessor and an associated analog to digital converter for conditioning the signal to be read by the microprocessor would give the device more functionality and allow the user to program the microprocessor to perform many different operations when a battery failure signal was detected. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device disclosed by Kissel according to the teachings of Simonsen to include a signal conditioning device and a microprocessor to

convert the analog current value to a digital voltage value in order for the microprocessor to process the signal."

The Applicants respectfully disagree. As such, the Applicants respectfully invite the Examiner to show a disclosure within the cited combination suggesting or motivating one to combine Kissel and Hammond with Simonsen or alternatively to provide an affidavit in support of this assertion or kindly withdraw the rejection.

Regarding Claims 3-6, 12-14, 17, 21, 23-24 and 29-32, the rejection suffers from the same deficiency for failing to show a disclosure within the cited combination suggesting or motivating one to combine Kissel and Hammond with Simonsen. As such, the Applicants respectfully invite the Examiner to show a disclosure within the cited combination suggesting or motivating one to combine Kissel and Hammond with Simonsen or alternatively to provide an affidavit in support of this assertion or kindly withdraw the rejection.

As such, allowance of Claims 2-6, 12-14, 17, 21, 23-24 and 29-32 is earnestly solicited.

Claim 28 was rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Kissel in view of Hammond and further in view of Dougherty et al. (U.S. Pat. App. Publication 2004/0189257) (hereinafter Dougherty). Applicants respectfully traverse the rejection.

Claim 28 recite limitations similar to that of independent Claim 1 and is therefore patentable over the combination of Kissel and Hammond for similar reasons. The rejection admits that the combination of Kissel and Hammond does not specifically disclose the claimed step of automatically determining a normal operating range of said signal over a period of time, as claimed. In order to overcome this failure, the rejection relies on Dougherty. The Applicants respectfully traverse.

The Applicants do not understand Dougherty to remedy the failures of the combination of Kissel and Hammond discussed above. Moreover, the Applicants do not understand Dougherty to teach or suggest automatically determining a normal operating range of the signal over a period of time, as claimed. Dougherty discloses a routine for predicting whether a battery may deliver a sufficient amount of power by using an input signal obtained from sensors representative of the voltage of the battery during at least one of the periods wherein the routine compares the average open circuit voltage to the average voltage during the ripple interval to determine an “average voltage drop” for setting a range of pre-determined values (see Dougherty, paragraph 43). The Applicants do not understand Dougherty to teach or suggest that determining a normal operating range is automatic, as claimed. Dougherty fails to expressly teach or suggest that the determination of the normal operating range is automatic, as claimed.

Moreover, the rejection fails to show a disclosure within the cited combination suggesting or motivating one to combine Kissel and Hammond with Dougherty. As such, the Applicants respectfully invite the Examiner to show a disclosure within the cited combination suggesting or motivating one to combine Kissel and Hammond with Dougherty or alternatively to provide an affidavit in support of this assertion or kindly withdraw the rejection.

Accordingly, Kissel alone or in combination with Hammond and Dougherty does not render independent Claim 28 obvious, under 35 U.S.C. 103(a). Dependent claims are patentable by virtue of their dependency. As such, allowance of Claim 28 and its dependent claims is earnestly solicited.

For the above reasons, Applicants request reconsideration and withdrawal of these rejections under 35 U.S.C. §103.

CONCLUSION

In light of the above listed remarks, reconsideration of the rejected claims is requested. Based on the arguments presented above, it is respectfully submitted that Claims 1-9, 11-19, 21-26 and 28-32 overcome the rejections of record and, therefore, allowance of Claims 1-9, 11-19, 21-26 and 28-32 is earnestly solicited.

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